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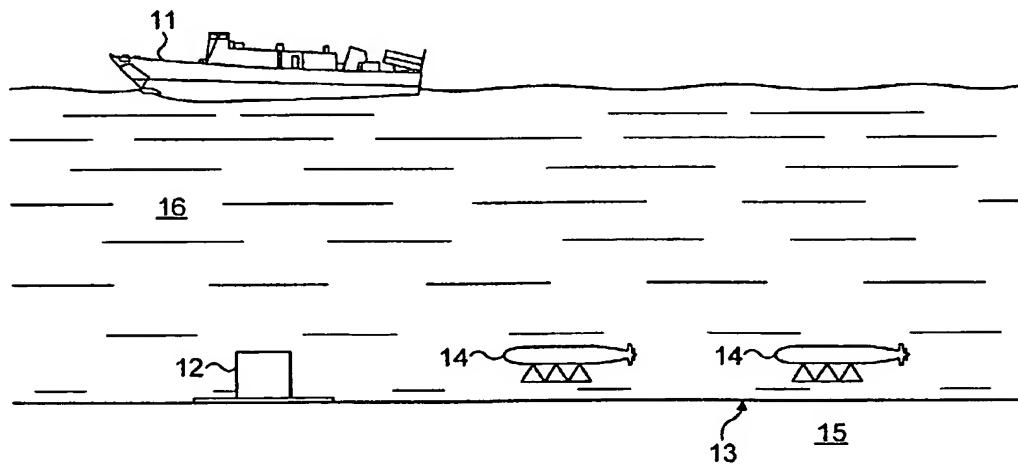
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(54) Title: SEISMIC EXPLORATION



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(57) Abstract: The present invention provides a seismic exploration and imaging system for producing seismic survey reports of subsea geological structures. The exploration system provides a method in which both P-waves and S-waves are detected without the need for placing detection apparatus in contact the seabed. A seismic event is applied (12) to the earth's surface (13), and the detected response including P-waves and S-waves in the earth's. The detecting apparatus comprises a means for monitoring and recording the response to the seismic event in the form of movements of particles at the earth's surface, from a position spaced from the earth's surface. Particles at the surface will respond both to P-wave and S-wave stimulation and so their movements will be representative of the two waves. These movements are detected from a distance.

# INTERNATIONAL SEARCH REPORT

Int. Application No  
PCT/GB 03/02823

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 G01V1/38

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G01V

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 134 966 A (DONSKOY DIMITRI M ET AL) 24 October 2000 (2000-10-24)  column 3, line 8 - line 11 column 3, line 16,17 column 3, line 19,20 column 4, line 23 - line 25 column 4, line 33 - line 36 column 4, line 44 - line 50 column 4, line 53,54 column 5, line 53 -column 6, line 7 column 6, line 8,9 column 6, line 10 - line 26 figures 1,2	1-3,5,7, 8,11,13, 14, 16-19, 21-24, 27,28, 30,32
Y		6,9,25, -/--

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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# INTERNATIONAL SEARCH REPORT

Inte      Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 5 070 483 A (BERNI ALBERT J ET AL) 3 December 1991 (1991-12-03)</p> <p>column 5, line 21 - line 38 column 6, line 23 - line 30 column 7, line 56 - line 68 column 13, line 5 - line 10 column 21, line 5 - line 9 figures 3-5</p> <p>---</p> <p>BERNI A J: "REMOTE SENSING OF SEISMIC VIBRATIONS BY LASER DOPPLER INTERFEROMETRY" GEOPHYSICS, SOCIETY OF EXPLORATION GEOPHYSICISTS, TULSA, US, vol. 59, no. 12, 1 December 1994 (1994-12-01), pages 1856-1867, XP000486460 ISSN: 0016-8033 page 1857, column 2 page 1858, column 1 page 1859, column 1 page 1862, column 2 page 1863, column 1 page 1866 -page 1867</p> <p>---</p> <p>GB 2 347 744 A (MARCONI ELECTRONIC SYST LTD) 13 September 2000 (2000-09-13)</p> <p>page 2, line 4 - line 14 page 3, line 20 -page 4, line 1 page 4, line 10 -page 5, line 12 page 7, line 21 -page 8, line 15 figure 1</p> <p>---</p> <p>DE 40 04 228 A (MANTEL JUVAL) 14 August 1991 (1991-08-14)</p> <p>column 1, line 31 - line 48 claim 1; figure 1</p> <p>---</p> <p>WO 91 13373 A (GATEMAN JAN ; GATEMAN BERTIL (SE)) 5 September 1991 (1991-09-05) page 3, paragraph 2</p> <p>---</p> <p>US 5 477 324 A (BERTHELOT YVES H ET AL) 19 December 1995 (1995-12-19) column 2, line 5 - line 25 column 2, line 35 -column 3, line 7</p> <p>---</p>	<p>26</p> <p>1-4, 7, 8, 13, 14, 18, 19, 21-23, 28, 32</p> <p>1-5, 7, 8, 16, 21-23, 32</p> <p>1-3, 5, 7, 8, 21, 22, 24, 32</p> <p>1-3, 8, 11, 12, 21-23, 27, 32</p> <p>6, 25</p> <p>9, 26</p>
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**INTERNATIONAL SEARCH REPORT**Int'l Application No  
PCT/GB 03/02823**C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 843 597 A (GJESSING DAG K T ET AL) 27 June 1989 (1989-06-27) column 3, line 17 - line 55 column 4, line 23 -column 5, line 20 column 6, line 33 - line 40 claim 1; figures 1-3,5,6 -----	1-32

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Information on patent family members

Inte      Int'l Application No

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